Remarks

Reconsideration of this Application is respectfully requested. Claims 1-14 are pending in the application, with 1, 6, 12 and 14 being the independent claims. Based on the following remarks, Applicant respectfully requests that the Examiner reconsider all outstanding objections and rejections, and that they be withdrawn.

Objection to the Specification and the Claims

The Examiner objected to the specification and the claims on the ground that certain terms therein were misspelled. Applicant respectfully refers the Examiner to MPEP § 608.01, which states that "Examiners should not object to the specification and/or claims in patent applications merely because applicants are using British English spellings rather than American English spellings. It is not necessary to replace the British English spellings with the equivalent American English spellings in the U.S. Patent Application." (Emphasis in original.) Applicant asserts that the spellings of "signalling," "modelling," "modelled" and "generalised" are proper British English spellings and therefore need not be corrected. For this reason, Applicant requests that the objections to the specification and the claims be reconsidered and withdrawn.

Rejections Under 35 U.S.C. § 103

The Examiner rejected independent claims 1, 12 and 14 under 35 U.S.C. § 103(a) as being unpatentable over European Application No. EP 1104140 A2 to Moss ("Moss"). Applicant respectfully disagrees with the Examiner's characterization of Moss as applied

to independent claims 1, 12 and 14. For at least the following reasons, Applicant requests that these rejections be reconsidered and withdrawn.

Moss describes an OFDM transmitter whose input signal is modified prior to the inverse fast Fourier transform (IFFT) operations and subsequent transmission. More specifically, an input signal is modified in several different ways by sign switches 22 operating on sub-bands generated by a splitter 20. (Moss, ¶ 0015.) The modified signals form a plurality of candidate signals for transmission. (Id.) The signal of best quality (i.e., lowest energy) is chosen from amongst the candidate signals by a feedback loop that employs a transmitter model 54, an estimator 56, and a control circuit 64. (Id. ¶ 0018; FIG. 3.) When the best quality signal is identified by the feedback loop, that signal is passed to a transmitter amplifier 16 for transmission. (Id.) Included in the transmitted signal of Moss is "signalling" information indicating the setting of the sign switches 22 that yielded the best quality signal. (Moss, ¶ 0020.) The signalling information tells the receiver how to configure its corresponding switches to restore the OFDM signal. (Id. ¶ 0020; FIG. 2.)

Independent Claim 1

Independent claim 1 of the present invention recites "feeding forward a control signal based on the modelled peak amplitude from the model to the analog front end; and outputting the symbol data stream from the buffer through the analog front end under the control of the control signal." (Emphasis added.) It appears as if the Examiner first equates the "feeding forward a control signal" recited in claim 1 to the "signalling" feature of Moss. (Office Action, ¶ 14.) Applicant respectfully disagrees. The "signalling" feature of Moss merely appends to the transmitted signal the switch

configuration to be used by the receiver to restore the OFDM signal. (Moss, ¶ 0020.) The signalling information is thus part and parcel of the transmitted signal. This is unlike the "control signal" of claim 1, which does not become part of the transmitted signal and instead controls the operation of certain elements in the analog front end. (Application, p. 13, ll. 4-9; FIG. 1.)

Next, the Examiner asserts, without explanation, that "outputting the symbol data stream . . . under control of the control circuit" is shown in FIG. 3 of Moss by "outputting through 16 via 22." (Office Action ¶ 14.) It thus appears as if the Examiner now equates the "control signal" of claim 1 with the output of control circuit 64 as it directs the selection of the best quality signal from the plurality of candidates available at sign switches 22. Applicant again respectfully disagrees. The output of control circuit 64 cannot be equated to the "control signal" of claim 1 because it is not fed forward as required by claim 1. Rather, the output of control circuit 64 of Moss is the output of a feedback loop designed to modify the IFFT input vectors prior to transmission.

In sum, neither the "signalling" feature of Moss, nor the output of control circuit 64 may be equated to the forward fed "control signal" of independent claim 1. As stated in the present Application, "[i]t is not necessary to introduce extra complexity by defining new, relatively expensive special operations on the IFFT input vectors in order to achieve the goal. Nor is it necessary to pass a separate indication along with the main data in the symbol, to allow the receiver to reverse the process and recover the user data." (Application, p. 11, ll. 8-12.) The teachings of Moss are thus explicitly avoided by embodiments of the presently described invention.

For at least these reasons, Applicant asserts that the forward fed "control signal" of independent claim 1 is not taught or suggested by Moss. Indeed, certain limitations of Moss are explicitly recognized and avoided. Applicant therefore respectfully requests that the Examiner reconsider and withdraw the rejection to claim 1. Because claims 2-5 depend from claim 1, Applicant requests that the rejection of these claims also be withdrawn.

Independent Claims 12 and 14

The Examiner rejected independent claims 12 and 14 for substantially the same reasons as independent claim 1. (Office Action, ¶¶ 20 and 23.) For at least the same reasons noted above with respect to claim 1, Applicant respectfully requests that the rejection of independent claims 12 and 14 be reconsidered and withdrawn. Similarly, because claim 13 depends from claim 12, Applicant requests that this rejection also be withdrawn.

Independent Claim 6

The Examiner rejected independent claim 6 under 35 U.S.C. section 103(a) over Moss in further view of U.S. Patent No. 6,009,073 to Kaneko ("Kaneko"). Examiner relied on Kaneko to teach a digital-to-analog converter. (Office Action, ¶ 27.) The above noted defects with respect to Moss are equally applicable to independent claim 6, and are not cured by Kaneko. For at least this reason, Applicant respectfully requests that the rejection of independent claim 6 be reconsidered and withdrawn. Similarly, because claims 7-11 depend from claim 6, Applicant requests that these rejections also be withdrawn.

Miscellaneous

Applicant wishes to thank the Examiner for his observations regarding the Information Disclosure Statement. Certain references were cited and incorporated into the present Application for exemplary or explanatory purposes. Applicant understands that unless the references have been cited by the examiner on form PTO-892, or properly listed and initialed in an Information Disclosure Statement form PTO 1449, they will not have been considered by the Examiner.

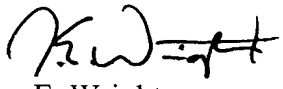
Conclusion

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicant believes that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Reply is respectfully requested.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.



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